



Reliability Driven®

# Service Bulletin No. 454

<i>MODEL</i> <b>J4500</b>	<i>TYPE</i> <b>Field Change Program</b>	<i>SECTION/GROUP</i> <b>1-Front Axle</b>	<i>DATE</i> <b>July 10, 2017</b>
<i>SUBJECT</i> <b>FRONT BRAKE HOSE AND CLAMPS</b>			
<i>CONDITIONS</i>			

Ref. NHTSA Recall No.: 17V-360

Ref. Transport Canada Recall No.: 2017-291

## **Customer Complaint:**

Motor Coach Industries ("MCI") has become aware that the J4500 series coaches listed in the table below may be subject to chafing between the hose routing clamps and the front brake hose due to over torquing of the hose routing clamps. The potential may exist whereas the brake hose may be distorted damaging the brake wall reinforcement.

If this occurs, the leaking front brake hose could cause a delay in front brake actuation which may increase coach stopping distance. Increased coach stopping distance may increase the risk of a crash or personal injury.

## **Cause:**

The cause of the defect is the over torquing of the hose routing clamps.

## **Corrective Action:**

MCI strongly urges owners of the coaches listed below to have the front axle brake hose retrofit performed as soon as possible.

66554	66748	66796 to 66798	66823 to 66824	66826
66841 to 66842	66844	66960	67000 to 68238	



## Parts

Qty.	New P/N	Description
1	26-04-0065	Kit, Front Brake Lines and Clamps <i>Kit Contents are:</i>
2	04-20-1817	Hose Assy, Brakes, Front
2	12-01-1308	Plate, Bracket Hose, Front Arm
2	12-01-1367	Bracket, Brake Hose, Front Arm, LH
1	12-01-1368	Bracket, Brake Hose, Front Arm, RH
4	19-01-1571	Capscrew, Serr. Flange, 1/4-20 x 1.00
12	19-03-0519	Nut, Hex, Lock, Flanged
6	19-04-0504	Clamp Assy.
6	19-04-0505	Plate, Clamp Cover
12	19-1-376	Capscrew, Hex, 1/4-20 x 2.25
4	19-2-25	Washer, Lock

Service Procedure:



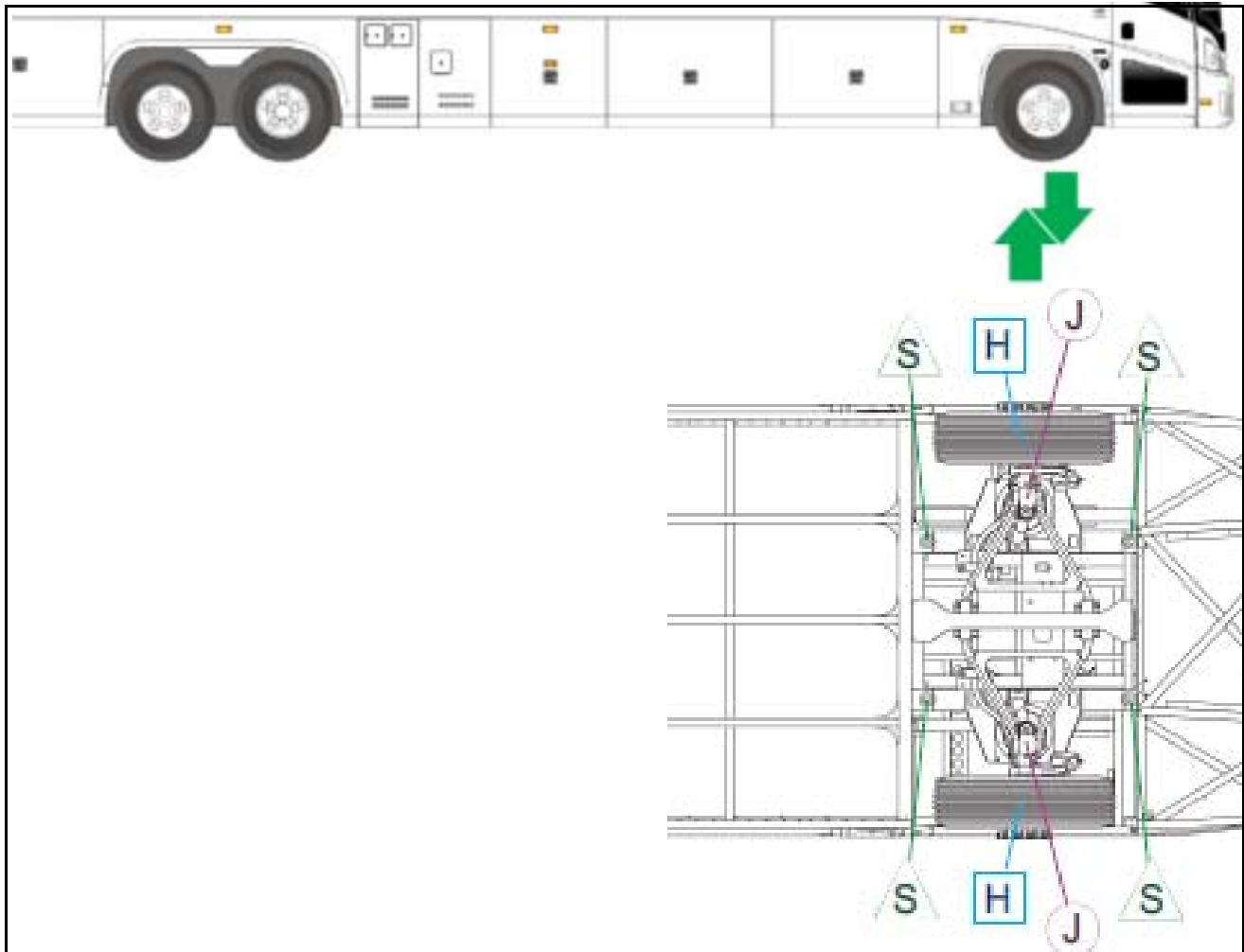
**Read this entire procedure before beginning work.**

**Use Safe Shop Practices At All Times.**



**To avoid personal injury, use caution when loosening the wheel nuts and when lifting the wheel off the hub as wheel and tire assemblies weigh more than 200 lbs**

1. Turn the main battery disconnect switch to the OFF position.
2. Apply the park brake.
3. Chock both sides of the rear tires.
4. Position a jack under the front jack pad, using the locations shown in Figure 1, and partially raise the coach with the tire still contacting the ground.



**Figure 1. Jacking and safety stand illustration.**

Item	Figure 1 Description
J	Jacking Point
S	Safety Stand ( Primary locations )
H	Hoisting Points ( Reference only )

5. Before the tire is completely off the ground, partially loosen the flanged wheel nuts.

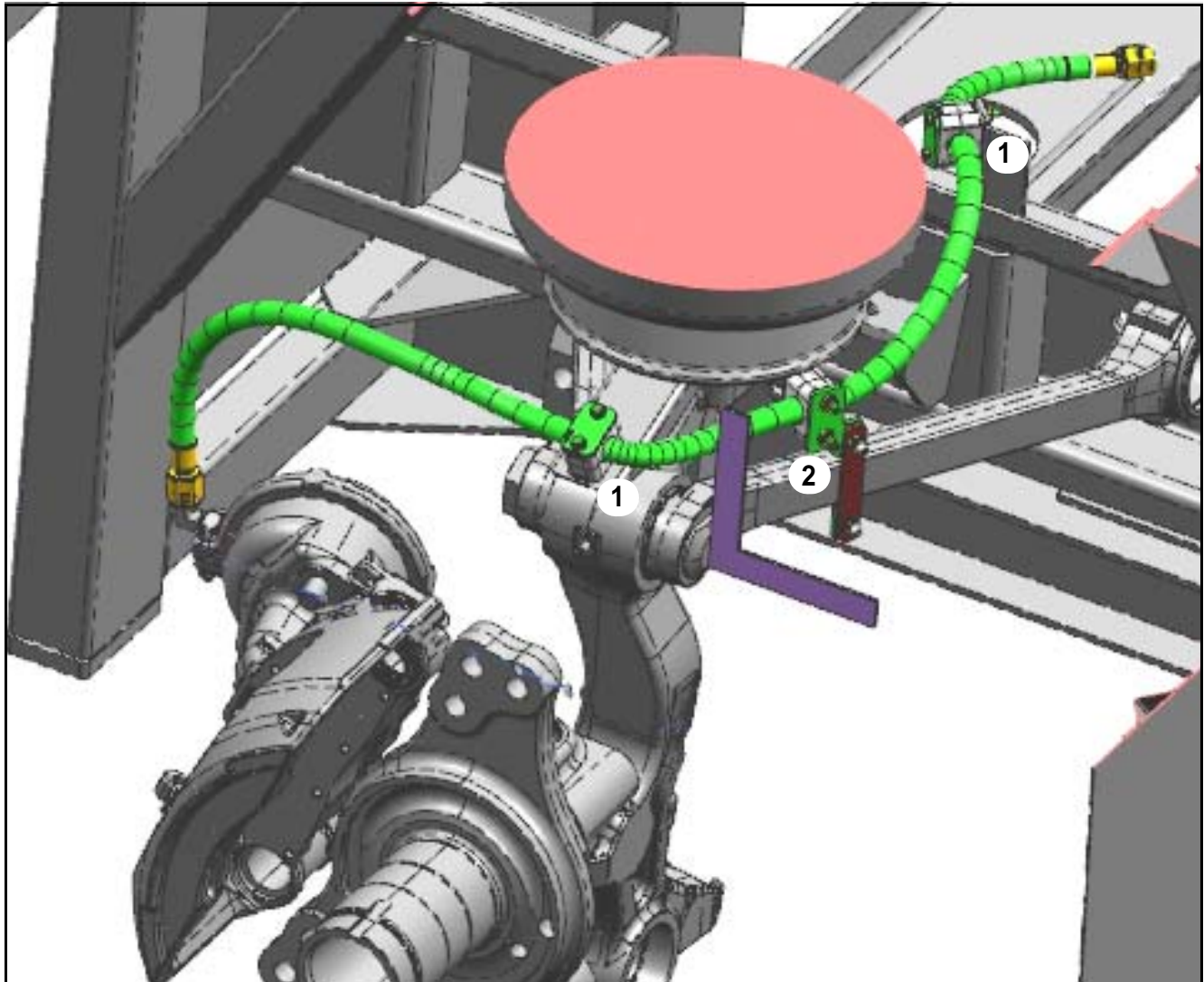
## **WARNING**

**To avoid personal injury, use caution when loosening the wheel nuts and when lifting the wheel off the hub as wheel and tire assemblies weigh more than 200 lbs.**

6. Operate the jack to raise the front wheel off the ground. Position a jackstand ( safety stand ) under the front axle bogie support point shown in Figure 1.



7. Remove and retain the wheel nuts. Remove the wheel from the front axle hub and place aside to be re-installed at a later step in this procedure.
8. Enter the coach cabin. Drain the air from the system by applying multiple service brake applications.
9. Exit the coach cabin.
10. Positioned adjacent to the front axle, locate the front brake hose assembly and routing clamps.
11. Cut and discard the tyrap securing the ABS sensor to the front brake hose assembly. Disconnect the front brake hose assembly from the front axle brake chamber port.
12. Discard the existing front brake hose assembly and mounting hardware.
13. Locate the front brake hose routing clamps. Remove and discard the routing clamps and mounting hardware.
14. Oriented to the existing mounting hole locations, install the new black polyamide clamp assembly, p/n 19-04-0504, with the supplied mounting hardware ( plate, capscrew, washer and nut ) supplied in the retrofit kit as shown as Items 1 / Figure 2.



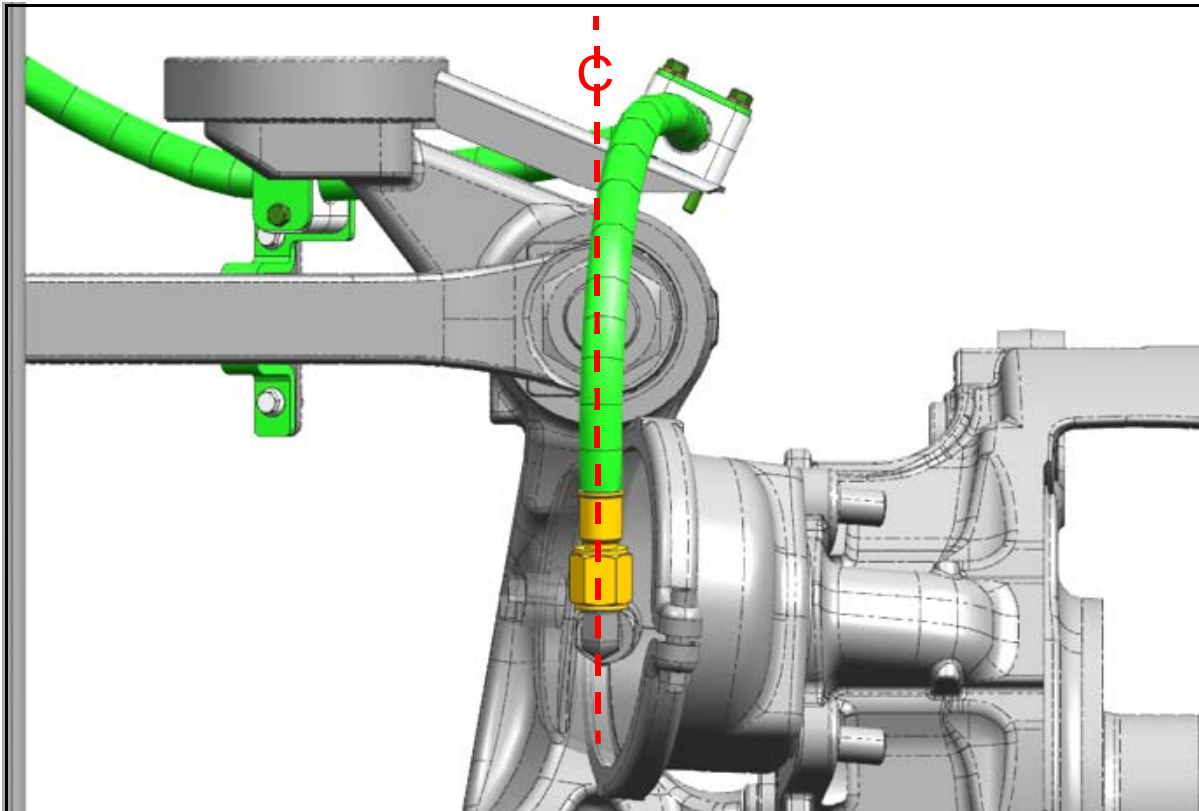
**Figure 2. Typical both sides of coach.**

Item	Figure 2 Description
1	Black polyamide clamp assemblies, p/n 19-04-0504, with supplied mounting hardware
2	Reference; front arm plate, p/n 12-01-1308, arm bracket hose bracket, LH and RH, p/n 12-01-1367 and 1368, mounting the black polyamide clamp assemblies, p/n 19-04-0504, with supplied mounting hardware

## NOTICE

***When connecting the front brake hose assembly to the brake chamber, ensure that there are no twists at any point throughout the routing.***

15. Apply drops of lubricant to the swivel section on the new front brake hose assembly, p/n 04-20-1817.
16. Orient and connect the new front brake hose assembly to the 90 degree fitting on the front brake chamber as shown in Figure 3.
17. Starting at the front brake chamber, route the front brake hose assembly to the first brake hose bracket location ( refer to Figure 3 ). Using the new black polyamide clamp assembly, mount ( fingertight ) the clamp assembly to the brake hose bracket.
18. Center the hose routing to the installation and tighten the existing swivel nut to secure in position, ensuring that there is no twist or flex at any point throughout the routing. Torque the swivel nut to 56-60 ft-lbs.



**Figure 3. Center the new hose routing to the installation.**

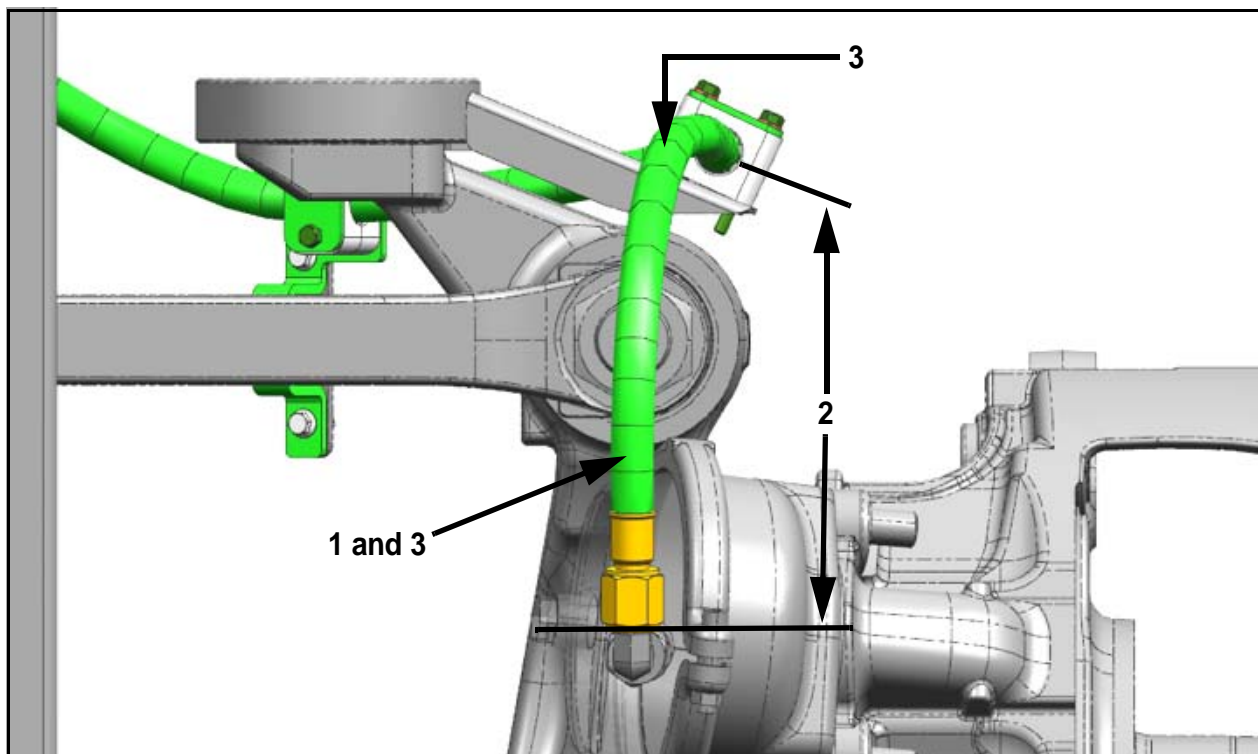
## CAUTION

To ensure proper installation and routing of the front brake hose interfaced with other coach components, the routing distance must be measured along the top section of the front brake hose assembly to the critical distance of 20.82 inches.

Stamped index marks on the front brake hose assembly are for reference purposes only, the measurements outlined in the bulletin supersede ALL index marks on the brake hose.

**DO NOT compress the surface areas of the front brake hose with the spring guard assembly.**

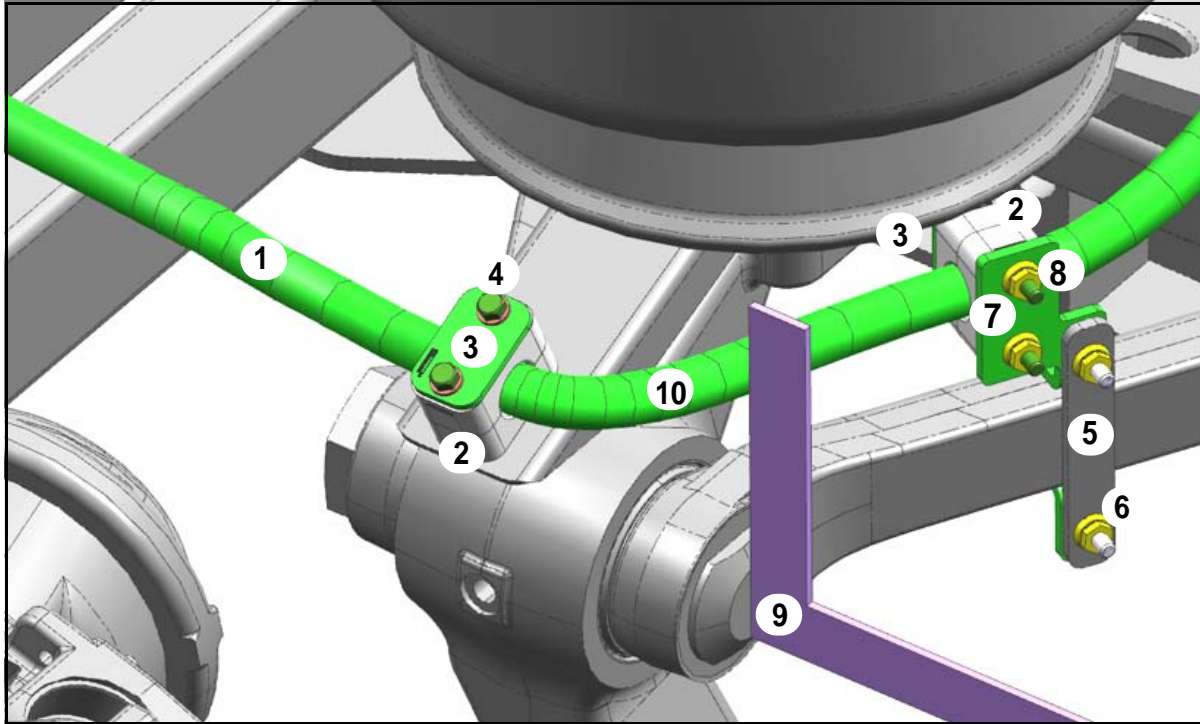
19. Using a measuring tape, route the front brake hose to a hose top section length of 20.82 inches between the bottom of the swivel fitting to the inside face of the clamp as shown in Figure 4. Tighten clamp hardware to secure in position. Torque clamp hardware to 71-80 in-lbs.



**Figure 4. Routing of the front brake hose.**

Item	Figure 4 Description
1	front brake hose assembly, p/n 04-20-1817
2	distance of 20.82 inch of hose length from bottom of swivel fitting to inside face of clamp
3	measurement of 20.82 inch to be taken along the top section of the front brake hose assembly

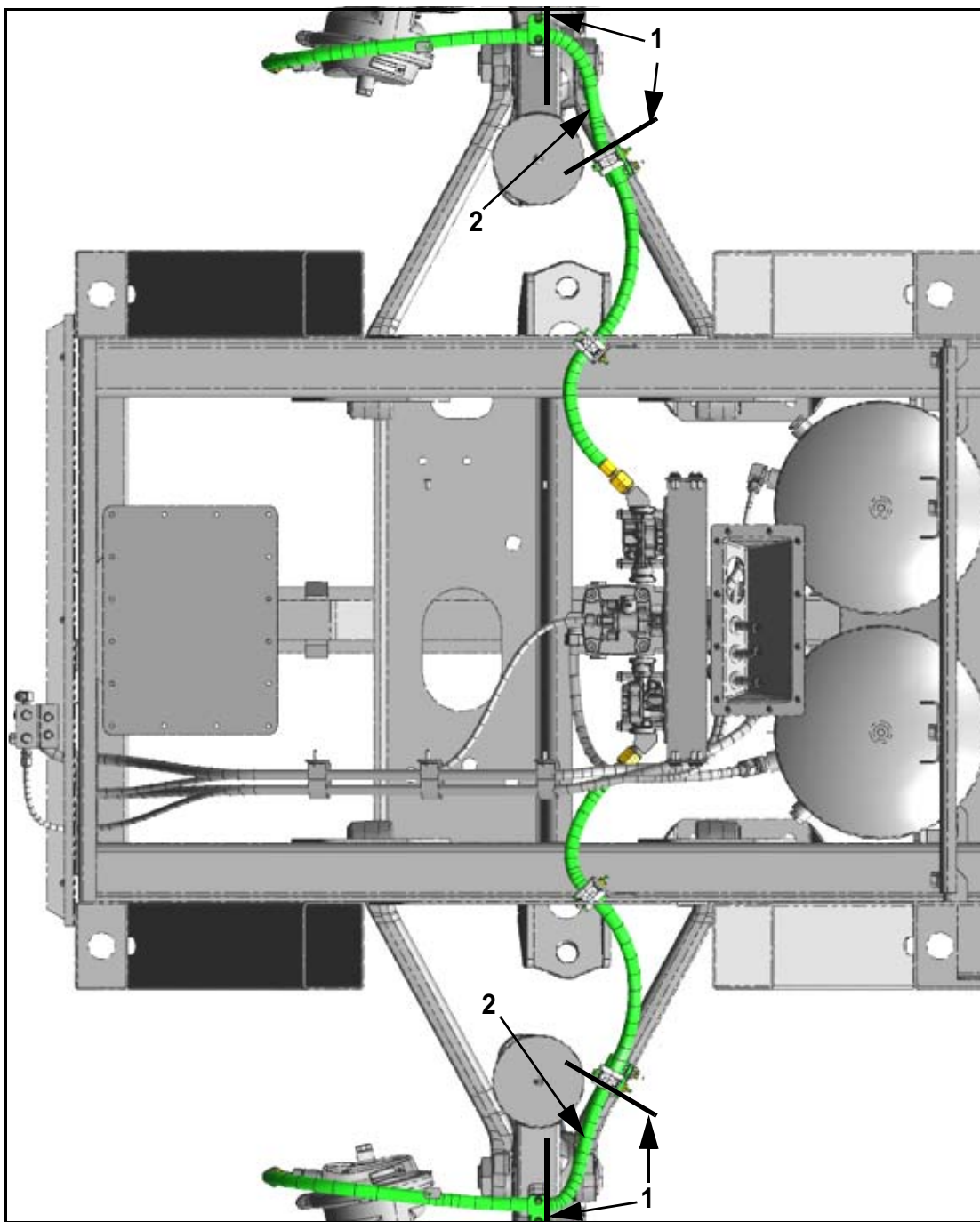
20. Route the front brake hose assembly inboard to the next ( second ) brake hose bracket.
21. Using new mounting hardware, mount the black polyamide clamp assembly, p/n 19-04-0504, to the front arm plate, p/n 12-01-1308 and arm bracket hose bracket, p/n 12-01-1367 ( LH ) or 1368 ( RH ) as shown in Figure 5.



**Figure 5. Front arm plate and clamp assembly installation.**

Item	Figure 5 Description
1	front brake hose assembly
2	black polyamide clamp assembly, p/n 19-04-0504
3	black polyamide clamp cover plate, SST, p/n 19-04-0505
4	capscrew, 1/4 x 2.25, p/n 19-1-376 and lock washer, 1/4, p/n, 19-2-25
5	front arm plate, p/n 12-01-1308
6	capscrew, serr. flg, 1/4 x 1.00, p/n 19-01-1571 and lock nut, flg, 1/4, p/n, 19-03-0519
7	front arm brake hose bracket, p/n 12-01-1367 Lh or 12-01-1368 Rh
8	capscrew, 1/4 x 2.25, p/n 19-1-376 and lock nut, flg, 1/4, p/n, 19-03-0519
9	square, reference purpose only
10	reference to Step 22, routing length of 8.00 to 8.25 inches, along the top section of the front brake hose assembly, of hose length from face to face of the black polyamide clamp assemblies

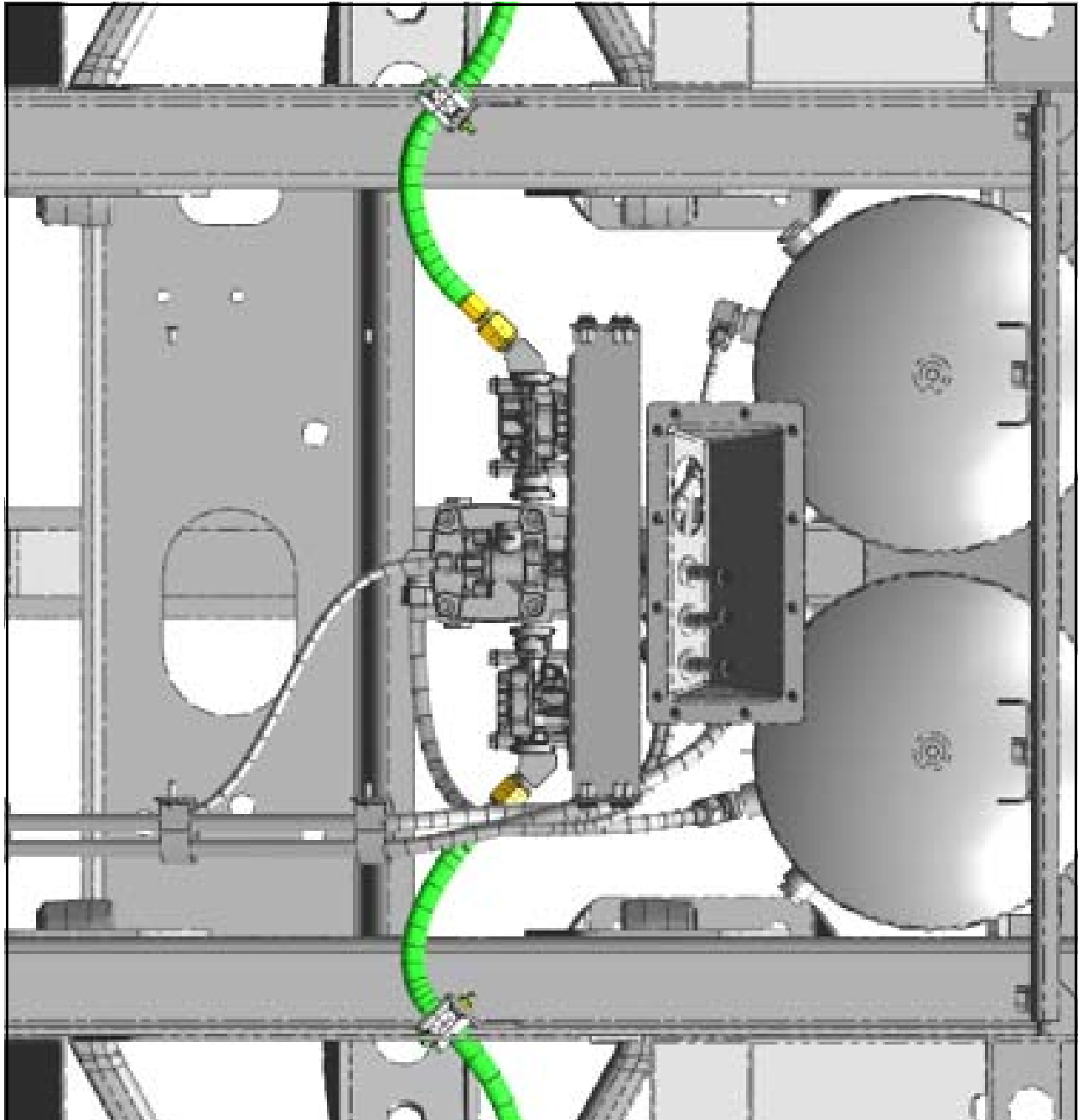
22. Using a measuring tape along the top section of the front brake hose assembly, set the front brake hose assembly routing length to 8.00 to 8.25 inches of hose length from face to face of the clamps while maintaining a minimum bend radius of 2.25 inches as shown in Figures 5 and 6.
23. Tighten clamps to secure in position and on suspension arm. Torque lock nut, Figure 5 / Item 6, to 8-10 ft-lbs. Torque 19-04-0504 clamp hardware to 71-80 in-lbs.



**Figure 6. Routing dimensions of the front brake hose between new clamps.**

Item	Figure 6 Description
1	front brake hose routing length of 8.00 to 8.25 inches from face to face of clamps
2	measurement to be taken along the top section of the front brake hose

24. Route the front brake hose assembly inboard to the bogie channel ( refer to Figure 7 ).
25. Oriented to the existing mounting hole locations on the bogie channel, install the new black polyamide clamp assembly, p/n 19-04-0504, with the supplied mounting hardware ( plate, capscrew and nut ) supplied in the retrofit kit to the clamp mount bracket ( refer to Figure 7 ).
26. Route the front brake hose assembly to the clamp assembly on the mount bracket. Orient the front brake hose in the clamp ( refer to Figure 7 ). Tighten clamp hardware to secure in position. Torque clamp hardware to 71-80 in-lbs.



**Figure 7. Hose routing and clamp installation on bogie channel.**



## NOTICE

***When connecting the front brake hose assembly to the front brake module valve, ensure that there are no twists at any point throughout the routing.***

27. Apply drops of lubricant to the swivel section on the front brake hose assembly, p/n 04-20-1817.
28. Orient and connect, using two ( 2 ) wrenches, the end of the front brake hose assembly to the fitting on the front brake module valve. Torque to 56-60 ft-lbs.
29. Using tyrap, secure the ABS sensor to the front brake hose assembly.
30. Repeat Steps 11 to 29 to opposite side of coach.
31. Upon completion of retrofit to both sides of the coach, enter the coach cabin.
32. With the air system full, apply and hold a service brake application. Have a second person spray a mixture of soapy water to the threads and swivel nut of the brake hoses bundle. Monitor for thirty ( 30 ) seconds for signs of a leak. If a leak is present, tighten and repeat step.

## NOTICE

***Ensure that the wheel is squarely mounted against the hub prior to fully tightening the wheel nuts.***

## WARNING

**To avoid personal injury, use caution when lifting the wheel on the hub as wheel and tire assemblies weigh more than 200 lbs.**

33. Re-install the front wheels. Using a calibrated torque wrench, torque wheel nuts to 450-500 ft-lbs. using a criss-cross sequence.
34. With the front wheels on the ground, turn the steering wheel all the way to the left. Visually inspect, through the wheel well, to ensure no contact between the brake lines and the front tires or the upper suspension control arm.
35. Turn the steering wheel all the way to the right. Visually inspect, through the wheel well, to ensure no contact between the brake lines and the front tires or the upper suspension control arm.
36. Visually check to ensure that the brake lines do not make contact or kink in any steering or suspension travel position.

*Procedure Complete.*



Mail or fax the completed limited warranty claim form and verification form to MCI's warranty department, or photocopy and mail to:

MCI Fleet Support  
Attn: Warranty Department  
7001 Universal Coach Drive  
Louisville, KY 40258  
Fax Number 1-800-360-8886

to receive credit for the hours used to complete this task. Contact the MCI Fleet Support Technical Center at 1-800-241-2947 for any further information.

### ***Field Change Program Conditions:***

The parts required for this change will be supplied without charge.

A labor allowance of 1.0 hour will be granted for this rework on affected J4500 coaches.

This labor allowance will be credited to your MCI Fleet Support Parts Account on receipt of the attached "MCI Field Change Program Verification Form" and a "Warranty Claim Form" as detailed in your Owner Warranty manual to MCI's Warranty department. A "MCI Field Change Program Verification Form" needs to be submitted for each VIN affected. Photocopy the attached "MCI Field Change Program Verification Form" as required for the number of affected coaches in your fleet.

Motor Coach apologizes for any inconvenience resulting from this campaign, but urges you to implement this change as soon as possible.

Sincerely,

Motor Coach Industries



Reliability Driven™

## MCI FIELD CHANGE PROGRAM (FCP) VERIFICATION

<b>CONTACT INFORMATION</b>	
<b>CUSTOMER NAME:</b> _____	
<small>(PLEASE PRINT)</small>	
<b>FCP INFORMATION – ONE FORM PER UNIT</b>	
<b>FCP#:</b> _____	<b>Coach Model</b> _____ <b>Model Year</b> _____
<b>COACH SERIAL #:</b> <small>(At least the last 5 digits)</small>	<b>DATE COMPLETED</b> __ / __ / __
<b>MILEAGE:</b>	
<b><u>IMPORTANT:</u> TO RECEIVE CREDIT FOR ANY ALLOWABLE LABOR CHARGES, THIS VERIFICATION FORM MUST BE RETURNED TO MCI UPON COMPLETION OF THE FCP.</b>	
<b>SUBMITTED BY: (Please Print)</b> _____	
	<b>DATE</b> __ / __ / __
<b>TITLE: (Please Print)</b> _____	
<b>SIGNATURE:</b> _____	
<b>COMMENTS:</b>  	

**FAX TO: 800-360-8886**

**MAILING ADDRESS:**

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ATTN: WARRANTY DEPT.  
7001 UNIVERSAL COACH DRIVE  
LOUISVILLE, KY 40258**